INDEX OF SURGICAL PROGRESS.

GENERAL SURGERY.

I. Deaths from Anæsthetics in 1885. By Ernest Jacob, M.D. (Leeds). Twelve cases are reported of death from chloroform, of which four were for trivial surgical manipulations; one might be considered rather a death from the exhaustion of a prolonged operation than from the direct action of the anæsthetic, while in another a large aneurism of the innominate artery might have precipitated a fatal result at any previous moment.

Three cases of death from ether, one where given for reducing a dislocation of the shoulder in a man, æt. 62, with fatty heart, emphysematous lungs and bronchitis; in the other two no autopsy having been made, no pathological data are available.

No deaths are reported from mixtures of chloroform and ether, from methylene bichloride or any other anæsthetic.—*Brit. Med. Jour.* 1886. March 13.

II. A Case of Re-Injection of Blood During Amputation at the Hip-Joint with Rapid Recovery. By A. G. Miller, M.D. (Edinburgh). In a case of strumous disease affecting both hips, the left knee and the left elbow, with a large abscess connected with the left hip, the patient being in very feeble condition, amputation at the latter joint became necessary. The limb having been exsanguinated to the middle of the thigh, and a powerful elastic tourniquet applied at the groin, a rapid circular cut was made right down to the bone in the upper part of the thigh, the femur sawn through, the femoral artery and some smaller vessels tied, and the tourniquet removed; some hæmorrhage still occurring from a few small vessels, they were also ligatured. All the blood which escaped, both from the femoral artery and the smaller vessels, amounting to eleven ounces, was caught in a vessel containing a solution of phosphate of soda and re-injected into the deep femoral vein. By an incision on the outer side of the thigh the head of the femur was then dissected out. The wound was dressed antiseptically. The patient suffered no shock whatever, nor depression of temperature after the operation. For the first few days, he was flushed and had a fuller pulse than before the operation, but he had no rise of temperature. The weakness and the anæmia of the patient, together with the increased vascularity of the parts due to the disease, rendered it very likely that he would not have survived the operation, had not the greater part of the blood lost been re-injected—the fact being that from the exsanguification of the leg, together with the reinfusion, there was probably an ultimate gain of blood after the operation.—*Edinburgh Med. Jour.* 1886. February.

J. E. Pilcher (U. S. Army).

NERVOUS AND VASCULAR SYSTEMS.

I. **Cases Illustrating the Treatment of Contusions of the Larger Arteries.** By H. R. Wharton, M.D. (Philadelphia). Reports two cases of contusion, respectively, of the femoral and brachial arteries. The first occurred in a man, æt. 34, with a lacerated wound of the thigh; pulsation was absent from the arteries of the leg, and the femoral artery was contused and filled with a firm thrombus for several inches, beginning about one inch below Poupart's ligament; there had been free hæmorrhage apparently from the external circumflex artery. The femoral was ligatured in the sound tissue on either side of the contusion, divided between the two ligatures and the parts cleaned and drained; collateral circulation was established in good time, but on the seventh day a slight secondary hæmorrhage was observed and controlled by pressure, and on the day following, profuse hæmorrhage occurred, for which the distal end of the artery from which the ligature had come away, was ligatured, but ligature of the femoral vein was necessary before the bleeding could be controlled. The patient reacted slowly, and gangrene of the affected limb appeared the next day, rapidly spreading upward to the abdomen and resulting in death thirty-six hours after the last operation. The second case was a contusion of the right elbow, and, at the time of admission to hospital, no pulsation could be detected in either radial or ulnar arteries. Under warm water dressings the temperature was improved, and in a few days arterial pulsation had returned at the wrist. On the eleventh day, great pain was evinced, and gangrene of the part appeared, spreading rapidly. The arm was consequently amputated on the same day, through the tuberosities of the humerus, and the patient made good recovery. Examination showed the brachial artery and vein matted together by a mass of lymph, their calibre practically obliterated by the results of inflammation, in and around their coats, and the vein containing a recent clot, the cause doubtless of the gangrene. The writer considers that in ordinary contusions, the injured part should be placed at rest, and, if the blood supply is found deficient, the temperature of the parts below the injury should be maintained by the application of external heat, to favor as much as possible the rapid establishment of the collateral circulation. Inflammatory lesions may be treated by evaporating lotions. Under this plan, recovery may occur with complete or partial obliteration of the artery at the seat of injury, if the collateral circulation, both arterial and venous, is satisfactorily established. Traumatic aneurism or gangrene may require amputation.—*Med. News.* 1886. March 27.

II. On the Operative Treatment of Popliteal Aneurism. By T. ANNANDALE, F.R.C.S.ED. (Edinburgh). Remarking that compression is usually tried before operative measures the writer expresses a preference for digital compression or the application of an Esmarch's bandage immediately below the aneurism, with pressure by means of a horse-shoe tourniquet upon the femoral artery at the groin; from time to time the tourniquet is loosened slightly, so as to allow some blood to flow into the sac, and is immediately tightened—the treatment being carried on for from two to three hours at a time, an elastic bandage being applied, but not so as to stop the circulation in the limb, after the tourniquet and Esmarch's bandage are removed. Upon the failure of compression or when a case is unsuitable for it, ligature of the femoral artery or amputation, when certain local conditions or complications exist, are the usual resort; but he advocates the "old" operation by laying open the sac and securing the artery at its point of communication with it, under antiseptic precautions, in preference to the ligature in (1) cases of large aneurisms filling up the space, and interfering by pressure with the venous and other circulation of the limb below, or causing serious nerve pressure, (2) rapidly growing aneurisms, which have attained some size, (3) ruptured and diffused aneurisms, (4) aneurisms which have involved the knee-joint by pressure, (5) aneurisms attacked with inflammation and suppuration, (6) aneurisms which the ligature of the femoral artery and compression have failed to cure, (7) arterio-venous and other aneurisms of traumatic origin, (8) cases of general arterial disease, provided surgical interference is necessary or advisable. In such of these conditions as are of an acute nature the operation must not be delayed, and symptoms of gangrene necessitate amputation. His method of operating is, after controlling the circulation in the limb by a tourniquet about the thigh, to open into the sac, and turn out the clots; a bougie is then passed into the artery at its opening into the aneurismal sac; through the wall of the sac, on either side of and above the opening, are made two small incisions, through which and under the artery with its contained bougie, the aneurism needle, armed with its antiseptic ligature, is passed, and the ligature drawn through and tied about the vessel upon the bougie, which is gradually withdrawn as it is tightened. Should there be only one opening, as is the case in a very large number of instances, the same proceeding is carried out upon the distal opening of the artery, the bougie being inserted into the opening again and passed downward; if there are two openings, they must be treated separately.—*Edinburgh Med. Jour.* 1886. February.

James E. Pilcher (U. S. Army).

III. Destruction of Portion of Axillary Artery by Sarcoma. By Mr. W. S. Savory. Man, æt. 33. A large sarcoma in axilla. While removing it a severe hæmorrhage occurred and was controlled by pressure forceps. The patient lived for a week, and then died from a violent hæmorrhage. The post-mortem showed that the part of the artery involved in the tumor was completely broken up. The substance of the arterial wall was infiltrated with sarcomatous growth. The internal coat was converted into a thin elastic membrane, and in places had given way, so that the growth presented free in the lumen of the artery.—*Lancet.* Dec. 12, 1885. P. 1094.

IV. Ligature of Sub-Clavian Artery for Axillary Aneurism. By Mr. BENNETT MAY. Man, æt. 60, chainmaker, formerly a publican. Aneurism of right pectoral and axillary regions. Skin over tumor thinning at one or two points. Double aortic murmur. The subclavian was ligatured with catgut, and the wound did well. The tumor contracted and hardened. The patient had, however, been drinking beforehand; he developed delirium and died of exhaustion on the eighth day. Post-mortem examination showed that the process of cure was well established. The author discusses the subject of treatment at length.—*Lancet.* Oct. 3, 1885. P. 613.

V. Observations on the Surgical Diseases of the Vascular System. By Mr. JOHN DUNCAN (Edinburgh). The author referring to the confusion of nomenclature in designating the varieties of vascular tumor, submits the following classification:

- Angioma
  - Cirsoid Aneurism
  - Cavernous Tumor
    - Aneurism by anastomosis
    - Arterial erectile tumor
    - Capillary erectile tumor
    - Venous erectile tumor.
  - Nævus

Cirsoid aneurism he reserves for the purely arterial tumor: cavernous and erectile to indicate growths whose analogue is the cavernous tissue of the penis. Nævus he takes to be a clinical term designating the congenital variety of capillary metamorphosis. Referring to treatment of cirsoid aneurism, Duncan claims that he was the first to suggest the use of electrolysis and to carry it out twenty years ago. Excision is successful but very dangerous.

Aneurism by anastomosis is a tumor in which arteries, veins and capillaries are all involved. It increases slowly and irregularly, has little tendency to ulceration, and has risks in regard to rupture somewhat similar to but not so great as those of varix. The *arterial erectile tumor* is one in which the cavernous metamorphosis of the capillaries is associated with ectasy of the arteries and arterioles which supply it; but in which the veins are not notably involved. It sometimes originates in congenital nævus. The *capillary* erectile tumor consists wholly of altered capillaries in which there is no pulsation or bruit nor marked venous dilatation cutaneous or subcutaneous. The tissue consists of blood spaces with free and large intercommunication, the trabeculæ composed of white and glistening connective tissue lined with an an epithelium continuous with that of the blood vessels. It is supplied by arteries which, if they be enlarged, are so only immediately before they enter the tumor, and the veins which issue, if dilated at all, soon assume their normal calibre. In the *venous* form while undoubtedly telangiectasis or capillary metamorphosis exists the chief feature of the disease is phlebectasis or dilatation of the veins. There is greater tendency than in the others to inflammatory reaction, to ulceration and to possible hæmorrhage.

The author advises electrolysis in the smaller pulsatile tumors. He will try in a suitable case the subcutaneous application of the galvanic cautery when electrolysis fails.—*Edinburgh Medical Journal.* Nov. 1885. P. 401.

The reporter has seen his colleague, Mr. Thornley Stoker, use the thermo-cautère of Paquelin with admirable effect in large venous erectile tumors.

Wm. Thomson (Dublin).

VI. Arterio-Venous Aneurism. By Dr. F. Bramann. (Berlin). B. has attempted to present, if not quite a complete, at least a fully representative collection of these cases. The first exact description of this trouble was given by W. Hunter.

Besides imperfect reference to various other cases, he gives tabulated extracts of 13 affecting the head, 14 between carotid and internal jugular, 10 between subclavian or axillary vein and artery, 63 between the brachial vessels, one between abdominal aorta and common iliac vein, one between common iliac artery and vein, 36 of the femoral vessels, 16 of the popliteal vessels or their branches, and one of the retinal vessels. He also adds a new case between the vessels in the left axilla.

As to causes, 108 arose from stabs, blows or cuts—of these 56 followed phlebotomy (3 on the temple, 53 on the arm)—29 from shot wounds, 6 from contusions, (5 without any wound, 1 from an abscess, 1 from amputation stump, 1 from an amputated spermatic cord in an ox), 4 without stated cause, and 9 spontaneously, while 4 were congenital—doubtless cirsoid aneurisms.

As to symptoms, the primary hæmorrhage, external or perivascular, is in no wise characteristic. The first most constant and positive sign of a communication is the buzzing murmur. This is in some cases observed immediately after the causal accident, more rarely not until later, even after a period of years. The murmur is characterized, in contradistinction to aneurismatic and other vascular sounds, by being continuous; it increases, however, at each systole and then fades into a gurgling hum. To the touch there is a peculiar buzzing and vibration (thrill, fromissement).

These symptoms are at first slight and localized, but as the trouble increases they are more extensive; on the leg, however, they rarely extend above Poupart's ligament. The murmur is transmitted centrally as well as peripherally, while other sounds of vascular origin are transmitted only in the latter direction.

Not less characteristic is the venous pulsation, though this may not be so easy to distinguish in the early stages, and where the vein lies deep or beside an artery. Like the murmur the pulsation is strongest at the point of communication.

It is sometimes possible to close the opening by pressure, when, of course, the venous pulsation disappears, that in the peripheral branches of the artery increasing.

B. gives some sphymographic tracings showing a pronounced arterial character and contrasting with the only other known curves from this trouble, those of Ebenan. He points out that the peculiarities (anacrotism and broad apex) in E's. were doubtless produced by the proximity of the crural artery.

The consequent distention of veins in any given seat of the trouble is shown to depend on the anatomical peculiarities.

In B's case (operated by Von Bergmann) he was fortunate enough, just previous to the operation, to be able to measure the pressure directly with a manometer. Normally this amounts in the branches of the brachial vein to about 9 mm. of mercury. Here in the central end of the vein it rose to 56 to 64 and in the peripheral end to 87 to 90 mm. (the patient being allowed temporarily to come out of the narcosis), a pressure almost equal to the norm in the radial or ulnar artery. He casually cites a measurement of the pressure in the ulnar artery in a patient operated by Bergmann for aneurisms of that vessel; in deep narcosis it was 58 to 69 mm., but in this condition the pressure sinks nearly one-half, hence the corrected normal pressure in the said vessel he estimates at 116 to 130 mm. This greatly reduced difference between the local venous and arterial pressures accounts for the stasis in the corresponding capillary tract. The stasis is, of course, far greater if the affected part hangs down or is dependent, when it leads to so called "local asphyxia," œdema, etc. A further consequence of this is the lowered temperature of the limb. In a case published by K. Bardeleben and one by Kneek, this difference between the temperature of the two hands amounted to 6° to 8°; in Bramann's case 4° to 5°, rarely 6°. Theoretically, and in point of fact, everything that diminishes the stasis—work, vertical suspension, etc.—raises the local temperature. However, in the axilla affected, the temperature was constantly 2° to 3°, at times even 5° higher than on the other side. The lowered local temperature is felt by the patient, and there is greater sensitiveness to cold. In addition to this, and doubtless owing particularly to the inactivity, a feeling of weakness, easy exhaustion, numbness and creeping is perceived in the affected member. Actual sensory or motor disturbances, however, occur only where there has also been some nerve injury.

These growths may preserve a constant size or be progressive, or remain many years unchanged and then enlarge rapidly. Their size may form an impediment to the free motion of the part; œdema, weakness and atrophy of the muscles, obstinate eczemas and ulcerations, rupture of the sack, if in the region of the neck, then cerebral and respiratory symptoms, etc., are more or less frequent consequnces.

The various methods of treating arterial aneurisms have also been applied to this form. Of all the bloodless methods of treatment—expectant, general depressive, by ice, digital compression (direct and indirect), instrumental compression, galvanopuncture, injection of coagulating solutions, etc., digital compression shows the best results. Its successes, however, have been chiefly in fresh cases near the elbow.

Ligature of the artery central to the communication has also its objections. Nutrition of parts peripheral to it will still suffer, and gangrene may develop; hæmorrhage or pyæmia has frequently followed; then a collateral circulation often develops and the original trouble somewhat diminished appears again. Far more favorable are the results from ligature above and below the aneurism; but most favorable is double ligature with extirpation of the intermediary enlargement. Of nine cases thus operated all were cured, seven of them, however, under antisepsis. In eleven cases amputation was resorted to, either for primary cure of the trouble or after other operations, with six cures and five deaths.

Various other operative methods are referred to. Operative treatment may be contraindicated by general affections of the vascular system.—*Arch. f. klin. Chirg.* 1886. Bd. 33. Hft. 1.

W. Browning (Brooklyn).

HEAD AND NECK.

I. **Hernia Cerebri Treated by a Silver Plate Closing the Opening in the Skull.** By Dr. Maclaren (Carlisle). At the London Clinical Society on March 12, Dr. M. read an account of a man æt. 26, with a compound fracture of the skull, from which ten fragments of bone were removed, leaving an aperture three inches long and varying in breadth from one inch above to half an inch below. "It was three-quarters of an inch in front of and parallel to the left temporal ridge, and its lower end was at the supra orbital ridge. Some brain which had protruded was removed and some diffluent brain gently syringed away." The accident occurred on March 25, and on April 14, Dr. M. removed a hernia cerebri which had occurred, placing a silver plate (a rolled out florin) inside the skull so as to block the opening. On May 3 the hernia cerebri again existed owing to the plate slipping to one side within the skull. The protrusion was cut off and this time the plate so secured with wire that it could not be thrust to one side. The scalp was sutured over the plate. The latter was left in for two months, no protrusion occurring, when it was removed and the wound soon healed.

The right side was paralysed when the patient first came under treatment. When discharged from the hospital on September 5 there was slight dragging of the right leg, absolute paralysis of the right arm, and slight want of expression on the right side of the face. Partial aphasia. During the latter part of his stay in hospital he had two fits and has had several since,mostly at night, and always with an aura. The author pointed out the very small amount of local irritation caused by the plate, which did not exercise any pressure on the brain but merely replaced the normal covering.—*Lancet.* March 20. 1886.

C. B. Keetley (London).

II. The Mechanism of Indirect Fractures of the Skull.

By C. W. Dulles, M.D, (Philadelphia). Adopting the theory of Von Wahl that fractures of the skull may be divided into (1) crushing fractures, in which the line of fracture runs at right angles to the axis of the force applied; and (2) bursting fractures in which the lines of the fractures are parallel to the axis of the force which gives rise to them and which begin at some point in a line which, like the equator in relation to the poles of the earth, circumscribes the hollow figure in a plane equally distant from both points of compression. In compression of the skull which may be gradual, as in a vise, or sudden as when affected by a blow or fall, its elasticity comes into play while its diameter, which is parallel to the force applied, is shortened and its diameters which lie at right angles to this, are lengthened. The result is that indirect fractures run in meridional lines. As a result of an analysis of the experiments of Messerer, the writer concludes that (1) bursting fractures are more likely to occur at the base than in the vault; (2) force applied to the side of the head may be expected to produce a bursting fracture crossing the sagittal equator which is more likely to occur in the base than in the vertex; (3) force applied to the forehead or occiput may be expected to produce a bursting fracture crossing the coronal equator; such a fracture is likely to occur in the temporo-parietal region and nearer to the base than to the vertex; (4) force applied to the vertex or base of the skull may be expected to produce a fracture at the base. These views he supports by an analysis of 119 cases of which 111 present fissures in accordance with the bursting theory, while only eight seem to contradict it. Subject then to certain modifications due to the structure of the skull, its coverings and contents, etc., he believes that when a sufficient force is applied to any curvilinear part of the skull, if this part does not give way immediately, the axes of the skull lying in the same line as that of the applied force is shortened; all the axis lying in planes at right angles to this line are correspondingly lengthened, with a proportional lengthening of their circumferences and separation of their meridians; so that the direct depressing force is converted into an indirect disruptive force acting at right angles to the direction of the former. The effect is to produce a fissure or fissures which will have a general meridional direction.—*Jour. Am. Med. Assn.* 1886. March 27 and April 3.

III. Gunshot Wound of the Head followed by Insanity, the Formation of a Cerebral Cyst and Recovery After Aspiration. By C. F. McDonald, M.D. (Auburn, N. Y.) Reports the case of an insane convict, æt. 27, who had received a self-inflicted pistol shot wound of the skull about $^{3}/_{8}$ inch from the median line and $1^{3}/_{8}$ inch from the hairy scalp and, since that time has continuously displayed signs of aberration culminating in marked insanity on June 2, 1885, with clearly defined head symptoms. On the 7th, the depression in the forehead was exposed by Dr. Wells by a crucial incision, from which it was discovered that the opening in the skull was closed by fibrous, not bony tissue; in the expectation of finding an abscess cavity, the needle of a hypodermic syringe was thrust through this tissue in several directions until the barrel was found to be filling with a serous fluid, all of which was withdrawn to the extent of about two drachms. The wound was closed and dressed. On emerging from the anæsthetic the patient was found to have fully regained his mental equilibrium, in which condition he still remained five months later, the wound having been promptly cured.—*Am. Jour. Med. Sci.* 1886. April.

IV. Total Extirpation of the Tongue by Kocher's Method. By R. F. WEIR, M.D. (New York). A case of true epithelioma involving the right half of the tongue opposite the last molar teeth. The whole tongue having been found to be involved, it was drawn out and removed at the level of the hyoid bone after the side of the mouth had been opened by incision under the jaw. The patient was discharged cured 28 days after the operation. The operator considered the thorough carrying out of aseptic treatment a very important factor in securing this rapid result, and his modification of the "sticky" gauze of Billroth greatly facilitated it. His formula is: Resin, castor oil, alcohol, and iodoform in the proportion of 10, 6, 15, and 5 parts respectively, mixed together and applied to the gauze.—*Proceedings N. Y. Surg. Soc.* 1886. Jan. 12.

V. An Analysis of Seventy-Seven Cases of Tracheotomy. By R. W. LOVETT, M.D. (New York). Tracheotomy for pseudo-membranous laryngitis was done seventy-seven times at the Boston City Hospital in 1885 with twenty recoveries. Of the fifty-seven fatal cases, twenty-six died with symptoms of extension of the membrane to the trachea and bronchi, twenty-five with septic symptoms, four of heart failure during or after the operation and one each of pneumonia and peritonitis. Anæsthetics were not used in the cases of heart failure. In forty-four cases the operation was done on the first day of the croup, in sixteen on the second and in no case later than the third day. The average time of operation was the same in the cases that died and those that recovered, thirty-two hours after the onset of the croup. It was observed that in favorable cases the croup did not come on as rapidly as in the fatal cases. All the cases were treated as diphtheria. In the septic cases, tracheotomy was valuable as a means of euthanasia but totally failed in cases of extension of the membrane. Diphtheria of the wound was seen in no case. The systemic treatment consisted of small doses of mercuric bichloride with a milk diet with brandy.—*N. Y. Med. Rec.* 1886. April 3.

CHEST AND ABDOMEN.

I. Excision of the Pylorus for Carcinoma. By H. B. SANDS, M.D. (New York). In a man, æt. 31, sick for three years with dyspeptic and, later, cancerous symptoms traceable to the pylorus, an incision $3^1/_2$ inches long was made, with thorough antiseptic precautions, transversely over the pyloric extremity of the stomach, the various peritoneal reflections carefully separated from the walls of the stomach by the finger, all bleeding stopped, the pylorus enclosed between two sets of Rydygier's clamps, and the stomach cut through about an inch and a half to the left of the pyloric orifice; the pylorus and a small portion of the duodenum was then cut off with the scissors, the edges of the stomach wound were sutured together for about an inch and a half to two inches, and the duodenum stitched to the remaining orifice. Profuse bleeding followed the removal of the clamps, the employment of which caused delay such that in another case, the operator would depend on the fingers of an assistant. The toilet was performed with great care, the operation having lasted almost four hours. The patient died on the second day after the operation of asthenia. On autopsy, the cancerous infiltration of the stomach was found to have extended beyond the line of section.—*Proceedings N. Y. Surg. Soc.* 1886. Feb. 22.

II. Case of Laparotomy for Intestinal Obstruction With Recovery. By R. WINSLOW, M.D. (Baltimore). A colored woman, æt. 22, had had symptoms of intestinal obstruction for five or six days and, all efforts to produce defæcation having failed, laparotomy was done in a small and ill-ventilated bedroom, with corrosive sublimate antiseptic precautions; the incision was made in the linea alba two inches long, and afterward extended to six inches in length. A loop of ileum was found firmly adherent to the uterus and rectum, and, after the adhesions had been broken down, the seat of greatest constriction was found to have been about six or eight inches from the ileo-cæcal valve, at which point the bowel had been bent sharply upon itself. In separating the gut, its peritoneal coat was torn off in several places, and in one, where the intestinal wall looked weak, five Lembert sutures were introduced. Peritonitis had not actually set in, although it was the opinion of those present that the patient could not have lived forty-eight hours longer. The toilet was performed with care, the abdomen closed and iodoform dressing applied. Reaction was good and recovery complete eighteen days later. Flatus and fæces passed respectively on the second and fourth day. In connection with this case, the writer refers to two recent unpublished cases of this operation, one of which was due to the adhesion of a loop of intestine to the pedicle of an ovarian tumor which had been successfully removed some weeks previously; the other was due to a strangulation of a small portion of the gut in the femoral ring, which produced no symptoms by which the seat of constriction could be located before opening the abdomen; laparotomy was performed, the incarcerated intestine released and the patient recovered.—*Am. Jour. Med. Sci.* 1886. April.

III. Enterotomy for Intestinal Obstruction from Impacted Gall-stone. By F. LANGE, M.D. (New York). A woman, æt. 60, had presented symptoms of intestinal obstruction for four days with vomiting and peritonitis and a history of previous attacks of impacted gall-stones. On explorative laparotomy by median incision, a gall-stone, $2^1/_2$ to 3 cm. in diameter, was found impacted in the small intestine; on longitudinal incision this escaped easily, the intestinal and abdominal wounds were closed promptly, but the patient died eight hours later of asthenia.—*Proceedings N. Y. Surg. Soc.* 1885. December 22.

JAMES E. PILCHER (U. S. Army.)

EXTREMITIES.

I. On Shortening by Operation the Bones of the Limbs in the Treatment of Injuries Complicated with Extensive Destruction of the Soft Parts. By Dr. MARTEL (St. Malo). Dr. Martel first conceived the idea that when extensive destruction of soft parts had taken place, it would be better to reduce the bones to a corresponding length by resection, than to rest satisfied merely with amputation, as long ago as 1882. He was then attending a suitable case, described in detail in the paper we are now noticing, but he was restrained from putting his idea into practice at that time, partly by the advice of a surgical friend, and partly by the untoward course of the case in question.

However, on June 2, 1885, a patient "B" æt. 32, was taken into hospital with a very severe compound fracture of the left leg. Anteriorly was a large wound whose extent was due to actual destruction rather than to retraction of the skin and subjacent tissues. The tibial fracture, oblique and not comminuted, was exposed in this wound, the ends overriding. The fibula was fractured in the middle.

The wound and its recesses were carefully washed with "strong" carbolic lotion, and afterwards, the limb was enveloped in a thick "*appareil ouaté.* The immobilization removed all pain. Reaction was moderate, (on the third day, evening, temp. 39. 8.) Quinine for the fever; morphia and chloral for insomnia. Appetite returning. The remainder of the history is that of a suppurating, but not inflamed wound, with sloughs separating and cicatrization progressing up to February 25, (the fifty-fifth day of the treatment). On this day Dr. Martel resected about 75 millimétres of the tibial shaft, sawing obliquely both above and below. Much of the bone removed was necrosed. A corresponding portion of the fibula was removed through a separate opening. The two tibial fragments were sutured with a single stitch of thick silver wire, which does not appear to have held them very firmly together. The carbolic spray was used during the operation, and both during the operation and afterwards, the wound was carefully washed with "strong" carbolic lotion. Drainage with a large tube behind the fragment. Then carbolized charpie dressing and gutta-percha splints.

On March 25 it is noted that "the osseous segments are united, but the uniting tissue is flexible." On or about this date the silver suture was removed from the bone. On April 25 "consolidation appeard complete." June 8 a fenestrated, silicated bandage was applied.

August 3 "only two small lenticular" ulcerations remained which soon afterwards healed completely.

The amount of shortening was 7 to 8 centimétres. There was a good deal of stiffness of the ankle joint. But otherwise everything was satisfactory; the limb was well shaped, and crutches and sticks were shortly discarded for a high boot.

The author is only cognizant of a single instance in which a surgeon was guided by an idea analogous to his own. In the Centralblatt für Chirurgie No. 50, 1884, Karl Loebker published a case in which, in order to facilitate apposition and suture of the ends of nerves and tendons, cicatrised and contracted after a transverse wound of the forearm, he resected portions of the radius and ulna. This operation was only moderately successful as regarded the ultimate results.

With regard to the question of what is the best time at which to undertake an operation like the author's, he points out that, until sloughs have begun to separate, it is not possible to be certain of the limits of destruction. After stating other considerations, he gives his opinion that the most favorable moment for resection is to be found between the tenth and twentieth day after the accident.—*Gaz. Med. de Paris.* 1886. Feb. 27, March 13 and 20.

II. Flat-Foot and the Construction of the Plantar-Arch.

By Prof. HUMPHRY, F. R. S. A lecture characterized by the author's masterly power of anatomical description. The first part is devoted to the normal structure and motions of the arches of the foot. It is followed by an account of a fresh dissection of a case of flat foot, and by the author's views of its causation and of the deductions as to treatment to be obtained from the pathology of the specimen described: " the only (osseous) deviation from the natural conformation " said to have been present, is described as follows: The convex anterior part of the astragalus below this rested in a preternaturally deep concavity of the scaphoid; and the inferior and inner part, thinly und unevenly covered with cartilage, was in contact with the expanded calcaneo-scaphoid and deltoid ligaments. By these changes in the form of the articular surfaces the ball-and-socket between the astragalus and scaphoid is deepened and lessened in area, and is surmounted by and continued into a flat or arthrodial portion, which restricts, and indeed almost prevents movements between the two bones." He considers these osseous changes to be a consequence and not a cause of the deformity. He notes that the alteration in the bones is of such a kin *as to prevent rather than favor a further increase of the deformity.* "At the same time it would have been an obstacle to the return to the natural position, which, in so advanced and long-standing a case, and with such alteration in the articular surfaces, *could not have been effected without osteotomy*, if at all." The italics are ours. The author believes in the muscular and ligamentous origin of flat-foot. He sums up his views as to treatment thus: "In the early stages relief from weight and muscular exercise of the foot will effect a cure. In the later stages, especially if such bone-deformity as we have witnessed have taken place, nothing short of an osteotomy will do good."

Prof. H. lastly points out the "contracted and irritable condition" into which fall the muscles on the fibular and extensor side of the foot. He says that "this state is relieved by rest, especially if the rest is combined with extension by means of a well-applied splint: but it soon returns unless the treatment is continued for a sufficient period."

WOUNDS—INJURIES—ACCIDENTS.

I. Surgery of Gunshot Wounds of Knee-Joint. By Sir WM. MACCORMAC. The author, in describing two cases in which he lately removed bullets deeply imbedded in the condyles of the femur, with results practically perfect, observes: "Perhaps, after all, a gun-shot injury of the knee may not always be so disastrous as it was at one time assumed to be. Langenbeck told me he had met with at least one hundred cases of penetrating wounds of the knee-joint followed by recovery, during the Franco-German war. Many cases of recovery after a bullet had traversed the joint and fractured the bones are recorded by the Surgeon-General of the United States army; and then there are the remarkable results published by Bergmann and Reyher obtained after antiseptic occlusion in the Russo-Turkish and other campaigns. During the American war 338 cases of unmistakable fracture involving the bones of the knee-joint made good recoveries after an altogether expectant plan of treatment—that is, both life and limb were preserved. Many of the cases, besides the one which I have first quoted, are most remarkable, but for the details I must refer to the Surgeon-General's report. A conservative treatment, whenever it is possible to adopt it, is probably by far the most promising one for gunshot injury to the knee-joint, and it has proved the most successful, especially in recent campaigns. Excision of the knee for gunshot injury in time of war has hitherto been disastrous, while amputation has been very fatal also.—*Lancet.* February 27. 1886.

BONES, JOINTS, ORTHOPÆDIC.

I. Chronic Rheumatic Arthritis of the Hip-Joint. By. W. Adams. (London). In this paper, read at the Harveian Society, March 4, the author gives the following diagnostic table, contrasting the disease in question with Charcot's joint disease:

Rheumatic Arthritis.	*Charcot's Disease.*
1—Changes chiefly hypertrophic.	1—Changes chiefly atrophic.
2—Commences in the soft tissues.	2—Commences in the bones.
3—Painful throughout its course.	3—Generally painless.
4—Pain confined to the joint.	4—Pains shoot through the limbs.
5—No febrile disturbance; no gastric or ocular symptoms.	5—All these symptoms are present.
6—Reflex symptoms.	6—Reflex symptoms absent.
7—Limited mobility.	7—Flail-like mobility.
8—Progress slow and chronic.	8—Progress rapid and acute.
9—Patients often reach old age.	9—Patients seldom reach old age.

This apparently useful and complete table is, unfortunately, far from accurate. It may be justifiable to say that chronic rheumatic arthritis commences in the "soft tissues," because cartilage is certainly soft as compared with bone; but it is quite incorrect to say absolutely and without qualification that febrile disturbance, gastric and ocular symptoms are "all present," in Charcot's disease. There are many cases without gastric disturbanco; it is more rare to find absence of ocular symptoms, nor are reflex symptoms necessarily absent. I have myself seen a woman with Charcot's disease of one knee and no other symptoms of tabes except the lightning pains; a man with Charcot's disease of the left shoulder and no ataxic symptoms whatever except, possibly, a contracted condition of one pupil, and another man with Charcot's disease of the knee, and not only complete absence of all other tabetic symptoms, but actually increased patellar reflex. And such cases cannot be uncommon except, perhaps, in the practice of physicians who usually, of necessity, see Charcot's joint disease mainly in patients they are already attending for ataxia, or gastric crises, or the like.

It should be borne in mind that it is the rule for tabetic arthropathies to come on early in the course of the general disease.

C. B. KEETLEY (London).

II. On the treatment of Old Dislocations of the Humero-Radial Joint. By Dr. SPRENGEL (Dresden). Isolated dislocation of the radius head, even when not reduced, frequently admits a fair degree of mobility. Hence its treatment is by many (e. g. Albert, König, Hueter) considered to have little more than theoretical interest. Löbker (1884) reported three cases in children of dislocation forwards in which he secured a good result as regards function by exsection of the radial head.

S. gives a case to show that in dislocation backwards exsection is not, or not always, necessary. The patient was a boy of 6 years. The accident had occurred five or six weeks previously. Arthrotomy of the humero-radial joint was performed through the fovea ovalis to free the capsule interposed between capitulum and ulna. The head of radius was reposed and the tear in the capsule sutured. The result was functionally unexceptionable.—*Centbl. f. Chirg.* 1886. No. 10.

W. BROWNING (Brooklyn).

III. On the So-called Subluxation of the Head of the Radius in Young Children. By Dr. E. HOFFMANN. The construction of the elbow-joint is so complicated, that in many cases of injury to this part, a diagnosis may be very difficult. The introduction of the antiseptic method in surgery has been of great value in this direction, as under its proper observance, resection may be successfully carried out, and all doubt concerning the nature of such injuries, in many cases, dispelled. This mode of treatment, however, would hardly be indicated in cases of so-called subluxation of the radius-head in young children. After a forced extension, mostly combined with pronation, the child lets the arm sink down as if lamed, symptoms which disappear, however, as soon as reposition has taken place. These are the chief characteristics of this lesion. French authorities, chiefly among whom Goyrand may be mentioned, place the seat of this lesion in the lower radio-ulnar articulation, with a luxation of the head of the ulna or of the triangular cartilage. The author, however, considers that in the largest number of cases the superior radius articulation is the affected one, to which all the symptoms clearly point. The opinions concerning the nature of this lesion differ very much. Strubel, Koenig and others consider an interposition of the capsule to be the chief cause, this being relatively broad in children. Others, among whom are Roser and Albert, believe that a subluxation of the radius-head anteriorly takes place in these cases. In children the capsule being broad and yielding, and the cup-shaped depression of the radius-head very shallow, a dislocation of the radius-head anteriorly may take place without tearing the capsule. This subluxation is caused, doubtless, by forced pronation, says the author, but he does not think it has been sufficiently demonstrated, why the radius head should remain in this position, as if wedged there. These subluxations are caused generally by over-extension together with pronation, especially when the weight of the body is suspended by the arm. This is the result often seen, when children have been lifted by the arm over gutters, etc., by their nurses, or when strong traction on the arm has been made in pulling off a coat, etc. After the trauma has taken place, the child drops its arm as if lamed, and cannot be induced to move it. The hanging arm will be found pronated or in a position between pro-and supination, and is slightly flexed in the elbow-joint. Inspection and palpation will reveal nothing especially characteristic on the radius-head. Flexion is possible to a right angle, but further than this will be painful, as is also full extension. Supination is especially hindered. Certainty as to the true nature of the affection can be arrived at only when therapeutic measures are undertaken. For this purpose the arm is extended in supination and then flexed, while a pressure is made with the thumb in the region of the radius-head. At the moment of reposition a distinct snapping will be felt under the thumb. After reposition all movements of the arm will be found entirely free. A bandage is worn for about eight days, the arm being placed at a right angle and in supination.

The author treated ten such cases during the past year, of which seven were girls. He thinks that perhaps this frequency in girls might be due to the conditions favoring this trouble, or the larger size and greater pliability of the capsule. The ages of his patients ranged from one to five years.—*Deutsch. Med. Wochenschrift.* No. 7. Feb. 18. 1886.

(For full discussion of this subject see memoir by Mr. J. Hutchinson, Jr., in ANNALS OF SURGERY, August, 1885. Vol. II. P. 91.)

C. J. COLLES (New York).

GYNÆCOLOGICAL.

I. High Amputation, Compared with Total Extirpation of the Uterus for Cancer. By W. H. BAKER, M.D. (Boston, Mass.) From ten cases, all operated upon upward of four years ago, with no deaths at the time of operation and sixty per cent well after the four years, supported by the results of later operations, the writer concludes that (1) high amputation should be practised in all cases of cancer of the cervix or of the cervix and lower part of the body of the uterus, in which any radical operation is possible. His plan is to remove the entire cervix with a conical portion of the body of the uterus, the apex of the cone being nearly or quite at the fundus uteri and the base at the level of the internal os. (2.) Kolpohysterectomy should be performed in all cases of cancer of the body primarily and affeeting the cervix secondarily.—*N. Y. Med. Jour.* 1886. March 20.

II. Laparotomy and Pelvic Abscess. By A. R. JACKSON, M.D., (Chicago). Discussion by C. FENGER, M.D., H. T. BYFORD, M.D., and E. ANDREWS, M.D., (Chicago). Prof. Jackson details a case of pelvic abscess of about two months and a half duration, in which, by bimanual examination, he was able to get fluctuation and which seemed to be about to point in the vicinity of the symphysis pubis and laparotomy was decided upon to relieve the urgent symptoms. An incision three inches long, ending below at the upper portion of the *mons veneris*, was made in the middle line of the hypogastrium. Deepening the cut, the peritoneum was found, which, however, could not be separated from the parts beneath. Proceeding inward through dense structures the knife suddenly entered an abscess cavity, which at once gave exit to a stream of pus to the amount of two or three ounces. By the finger passed through the opening, the cavity was found to extend downward, behind and to the left of the uterus, about three inches. The abscess walls proper could not be accurately defined, the inflammatory process having matted together the upper part of the uterus, the left broad ligament, tube and ovary. The cavity was irrigated antiseptically and drained well with a result of uninterrupted recovery. To his paper Dr. Jackson appends a note from Mr. Lawson Tait in which he states that he has operated for pelvic abscess thirty-two times with a cure in all cases.

Prof. C. Fenger called attention to the fact that Dr. Jackson's operation was not a true laparotomy, since he did not open into the abdominal cavity but through a mass of adhesions into an abscess cavity, which was as simple an operation as opening an abscess of an extremity. He then proceeded to a review of the literature of the subject, referring to the conclusions of Sänger with regard to the etiology of pelvic affections, and those of Kœnig and Schlesinger with regard to the direction which inflammation travels in this locality; fluids injected into the region about the fundus uteri and uterine portion of the Fallopian tubes first pass upward into the iliac fossa to reach the crest of the ilium and then up the anterior abdominal wall or downward toward Poupart's ligament and into the true pelvis; fluids injected in the neighborhood of the internal os first fill the extraperitoneal connective tissue of the true pelvis, then follow the round ligaments as far as Poupart's ligament and ascend backward into the iliac fossa; when the injection is made near the lower portion of the posterior surface of the uterus, the fluid flows into the sac of Douglas and thence rises into the iliac fossa. Dr. Fenger approved of the treatment of these affections by laparotomy as a last resort, and objected to attacking them through the rectum except when near the anus, and especially reprobated the use of the knife in this viscus.

Dr. H. T. Byford, while not disapproving entirely of laparotomy. discouraged its too frequent performance, and advocated opening abscesses which point in the rectum through that part of the gut, believing that any abscess which is truly pelvic and points in the lower four or five inches of the rectum, can be reached by dilating the anus. He believed that an abscess with a single opening into the rectum, properly made or enlarged, will close up more rapidly than if such a fistula has not been enlarged or if an abdomino-rectal fistula is created. Opening through the vagina is always the preferable procedure when practicable.

Prof. E. Andrews remarked that many cases recover spontaneously and that these less serious cases are not as likely to come under the observation of the specialist, and related two cases in illustration; he considered that operation should be delayed until the presence of a pus cavity is positively known, and related a case of circumuterine abscess for the relief of which several operations—not laparotomies—had been performed without effect, pus continuing to be discharged by abdominal and rectal fistulæ; after death by asthenia, on autopsy, an extensive burrowing fistula was found but no abscess cavity, although a flattened pocket of considerable size was found in the hollow of the sacrum behind the rectum, this could not have been reached by laparotomy.—*Proceedings Chicago Gynecological Society*. 1886. February 19.

J. E. Pilcher, (U. S. Army).